

## **PCT**

REC'D	15	SEP	2004
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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Rec'd 1770 03 MAR 2005

01			No file reference							
Applicant's or agent's file reference 21.1105		its me reference	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)							
International application No. PCT/EP 03/10001				International filing date (day/mo	onth/year)	Priority date (daylind 05.09.2002	onth/year)			
Internat E21B3			nt Classification (IPC) or bo	l oth national classification and IPC	<b>:</b>					
Applica SERV		S PE	TROLIERS SCHLUN	MBERGER et al.						
1. 7	This i Autho	ntern ority a	ational preliminary exam and is transmitted to the	mination report has been pre applicant according to Article	pared by 36.	his International Preliminar	y Examining			
2.	2. This REPORT consists of a total of 4 sheets, including this cover sheet.									
	This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of 1 sheets.									
3.	This	repoi	t contains indications r	elating to the following items:						
	This report contains indications relating to the following items:    X Basis of the opinion									
	II Priority									
	HL									
	IV \(\sigma\) Lack of unity of invention									
	٧	Ø		ment under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; planations supporting such statement						
VI ☐ Certain documents cited										
	VII									
	VIII		Certain observations	on the international application	on					
Date	of sub	mieci	on of the demand		e of comp	etion of this report				
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#### INTERNATIONAL PRELIMINARY **EXAMINATION REPORT**

International application No.

PCT/EP 03/10001

l. Bas	is of	the	report
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1. With regard to the elements of the international application (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)): **Description, Pages** 1-9 as originally filed Claims, Numbers 1-7 received on 03.07.2004 with letter of 01.07.2004 **Drawings, Sheets** 1/4-4/4 as originally filed 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language: , which is: the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3). 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing: contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form. The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished. 4. The amendments have resulted in the cancellation of:

the description.

the claims,

the drawings,

pages:

sheets:

Nos.:

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5. 

This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Yes: Claims

1-7

Inventive step (IS)

No: Claims Yes: Claims

1-7

No: Claims

Industrial applicability (IA)

Yes: Claims

1-7

No: Claims

2. Citations and explanations

see separate sheet

# INTERNATIONAL PRELIMINARY International application No. PCT/EP 03/10001 EXAMINATION REPORT - SEPARATE SHEET

#### Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

D1: FR-A-2 784 095 (SCHLUMBERGER CIE DOWELL) 7 April 2000 (2000-04-07)

#### 1. Amendments:

1.1 The amendments filed with the letter dated 01.07.2004 are allowable considering Article 19(2) PCT.

#### 2. Novelty:

2.1 Since none of the prior art discloses all the technical features of independent claim 1, said claim as well as dependent claims 2-7 are considered as being novel over the cited prior art documents.

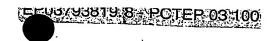
### 3. Inventive Step:

3.1 Document D1, considered as being the closest prior art document, discloses a well cementing composition comprising s base fluid, cement, reinforcing metallic fibers - amorphous cast iron fibers- (see p4 l28 - p5 l11), and particulate caoutchouc material to improve the flexibility of said composition.

The subject-matter of present claim 1 is different in the use of glass, carbon or polymer fibers, in addition to the metallic fibers, instead of caoutchouc particulate.

The technical problem solved by this differentiating features appears to be an increase of the stability of the cement slurry by increasing the sedimentation time, as shown in the present application (see table 3 and pages 5+6 of the present application).

Since none of the prior art document teaches or fairly suggests such a composition comprising these 2 types of fiber or such a technical effect, claim 1, as well as dependent claims 2-7, are considered as being inventive.



#### **CLAIMS**

- A cement slurry, comprising a base fluid including cement, a first fibrous component made of metallic fibres and a second fibrous component made of glass, carbon or polymeric fibres having a density close to that of the base fluid, said second fibrous component present at a concentration of less than 10% by mass of the total fibrous content of the fluid.
- The cement slurry of claim 1, wherein the metallic fibres comprise amorphous cast iron.
- The cement slurry of claim 2, wherein the metallic fibres are flat, plate-like structures having an average length less than 10mm.
- The cement slurry as claimed in any preceding claim, wherein the second fibrous component is selected from the list consisting of glass, polyamide, novoloid, polypropylene and polyester fibres.
- A cement slurry as claimed in any preceding claim wherein the second fibrous component has a length ranging from 5 to 35 mm.
- A well fluid as claimed in any preceding claim, wherein the base fluid exhibits shearthinning behaviour.
- A method of treating a well, comprising pumping into the well a cement slurry as claimed in any of the preceding claims.

